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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,835	05/31/2000	Robert A. Conant	9840-055-999	2586

24341 7590 12/09/2002

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EXAMINER

ROBINSON, MARK A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 12/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,835

Applicant(s)

CONANT ET AL.

Examiner

Mark A. Robinson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2002 and 19 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-41, 43, 44, 46-65 and 67-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31, 34-41, 43, 44, 46-55, 58-65 and 67-74 is/are rejected.
- 7) ☒ Claim(s) 32, 33, 56 and 57 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/24/02 has been entered.

Claim Rejections - 35 USC § 112

2. Claims 35 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 35 the first combteeth are said to be located between "second combteeth of the stationary combteeth assembly." However, the second combteeth are recited in claim 31 as being associated with the movable combteeth assembly. Accordingly, the relative arrangement of the combteeth is unclear.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 31,34-41,43,44,46-55,58-65 and 67-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (5,428,259).

Suzuki shows a combdrive assembly including stationary(11) and movable(12) combteeth assemblies, the movable assembly having elongated spines extending away from a central portion and containing teeth extending outwardly therefrom, and a torsional hinge(15) and anchor(14) for allowing rotation of the movable assembly. Suzuki does not expressly teach the assembly to support a mirror. However, Suzuki discloses in col. 1 lines 15-16 use of the drive assembly in a scanning system (which would in all likelihood include a mirror). It would have been obvious to the ordinarily skilled artisan at the time of invention to locate a mirror on the movable combteeth assembly in order to allow for optical scanning as per Suzuki's

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suggestion. Note that such a mirror would be located in the center of the movable combteeth assembly and thus the beams or "spines" containing the movable combteeth would extend away from the sides of the mirror as claimed.

Regarding claims 39-41 and 63-65, although not disclosed by Suzuki, specific values for the sizes of the combteeth assemblies and the mirror would be left to the ordinarily skilled artisan and would have been obvious depending upon the particular desired driving or deflection characteristics of the device.

Regarding claims 44 and 68, although not taught by the reference, use of an enclosure would have been obvious in order to protect the drive elements from deleterious environmental effects.

Regarding claims 46 and 69, although not taught by the reference, use of an optical filter would have been obvious depending upon the desired optical function of the drive assembly.

Allowable Subject Matter

5. Claims 32,33,56 and 57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten

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in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or suggest a torsional electrostatic combdrive assembly including the specific arrangement for the combteeth assemblies as set forth in the combination of claim 32 or 56.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rodgers et al show a drive assembly with movable combteeth spines extending away from a central load.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Robinson whose telephone number is (703) 305-3506.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached at (703) 308-1687. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MR

12/5/02


MARK A. ROBINSON
PRIMARY EXAMINER